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ABSTRACT

The purpose of this study was to measure fathers' and mothers' linguistic involvements with the development of communication between young siblings. A total of 39 2-parent families with 2 children were videotaped in semi-structured activities in a laboratory setting. The older sibling was from 18- to 26-months-old and the younger was from 4- to 8-weeks-old. Regardless of type of vocalization, when only one parent was present, utterances encouraging sibling interactions were more often aimed at girls than boys, with the result that they occurred more when both siblings were girls than for any other gender combination. Fathers were more active in issuing such utterances, especially to girls. When both parents were present, gender differences between parents disappeared, although the effects of children's gender did not. Overall, the results suggested that fathers very actively direct sibling interactions, especially those involving girls. (Author/RH)

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Fathers' and Mothers' Involvements in Sibling Communication

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Abstract

The purpose of this study was to measure fathers' and mothers' linguistic involvements with the development of communication between young siblings. Thirty-nine two-child mother-father families were videotaped in semi-structured activities in a laboratory setting. The older sibling was from 18 to 26 months old (mean = 22.4 months, SD = 2.5 months) and the younger sibling was from 4 to 8 weeks old (mean = 5 weeks, SD = 1.5 weeks). Regardless of type of vocalization, when only one parent was present, utterances encouraging sibling interactions were more often aimed at girls than boys, with the result that they occurred more when both siblings were girls than for any other gender combination. Fathers were more active in issuing such utterances, especially to girls. When both parents were present, gender differences between parents disappeared, although the effects of children's gender did not. Overall, the results suggest that fathers very actively direct sibling interactions, especially those involving girls.

Fathers' and Mothers' Involvement in Sibling Communication

It is clear from the literature that fathers and mothers interact differently with their young sons and daughters. This is particularly evident when parent-infant play is considered. Play (Lamb, 1981) and nonverbal stimulation (Belsky, 1980; Parke & Swain, 1980) seem to be distinguishing features of father-infant interactions, while mother-infant interactions are more often characterized by caregiving behaviors (Lamb, 1981) or by the initiation of intellectual activities (Clarke-Stewart, 1978). Some researchers have found mothers more responsive (Belsky, Gilstrap & Rovine, 1984) and affectionate than fathers (Belsky, Gilstrap & Rovine, 1984; Lamb, Frodi, Hwang, Frodi & Steinberg, 1982). On the other hand, fathers play in a more physically stimulating manner with babies (Crawley & Sherrod, 1984; Pedersen, 1980) and touch and rock them more (Parke & O'Leary, 1976). Fathers also use more imperatives and control language with their young children than mothers do (Clevenger-Bright & Stockdale, 1984; Malone & Guy, 1982; McLaughlin, Schultz & White, 1980). Fathers vocalize more to girls than to boys (Palkovitz, 1984) and both mothers and fathers give girls more praise and criticism than boys (Fagot, 1974; 1978).

Although we know very little about the roles each parent plays in encouraging sibling interaction, it is clear that fathers and mothers use different interactional styles with their young

children when alone with the child and use yet another style when both are involved with the child as a triad. Most parents seem less involved with their children when the other parent is present than when parent and child are interacting as a twosome (Belsky, 1979, 1980; Lamb, 1976; Clarke-Stewart, 1978; Parke & O'Leary, 1976; Pedersen, Anderson & Cain, 1980). Nonetheless, Field (1984) has indicated that mothers' interactive behaviors may be attenuated by the recency of their infants' delivery.

The extant research thus suggests that each member of the family has a set of linguistic repertoires, selection among which depends on the presence or influence of other members. Yet little is known about the ways parents develop, evoke or respond to sibling repertoires, particularly those involved with sibling interaction. It was hypothesized that if parent to child repertoires differ in other contexts, mother to child and father to child repertoires will also differ in terms of the type of encouragement given to foster sibling awareness and interaction. Examining parent/sibling repertoires was the purpose of the present study.

Design of Study

Participants

Subjects included 39 two-child mother-father families. The older sibling was a toddler from 18 to 26 months (mean = 22.4 months, SD = 2.5 months), and the younger sibling was an infant

from 4 to 8 weeks old (mean = 5 weeks, SD = 1.5 weeks). The sample included 13 male infant, male toddler pairs; 8 male infant, female toddler pairs; 8 female infant, male toddler pairs; and 10 female infant, female toddler pairs. Apgar scores, pediatric examinations for both children, and scores on the Denver Prescreening Developmental Questionnaire yielded no abnormal findings.

Scores on the four factor index of social status (Hollingshead, 1974) ranged from 1 to 8 with most scores between 3 (semiskilled workers) and 6 (technicians, semiprofessionals, small business owners). Over half of the mothers were full-time homemakers. Years of maternal education ranged from 10 to 19 years (mean = 14.2 years, SD = 1.87 years). Paternal education ranged from 11 to 20 years (mean = 14.8 years, SD = 2.23 years). Family income ranged from $7,500 to $40,000 (mean = $15,413, SD = $8,712).

Method

Each family was videotaped during semi-structured activity in the University interactive laboratory, a room furnished with a couch, chair, coffee table and magazines and child-sized furniture and toys. The videotapes analyzed for this paper were made when the infant was approximately 5 weeks old. They are based on forty-five minutes of family interaction. Fifteen minutes involved father only with the children, 15 minutes with mother only and children, and 15 minutes with the family together.[1] The order of the parents' involvement with the children was counterbalanced.

These pairings, mother and children, father and children, and both mother and father with children, constitute the "grouping" variable discussed in the results section.

The parents were told that we were interested in child development and wanted to see family interaction as it would occur at home. The parents were told that if normal home activities meant that they read while their children played, watched their children play, or played with them, they should feel free to do whatever was normal for their family. As it turned out, some parents read, some watched their children and some played with their children during the interactive sessions.

Description of Variables

All utterances of parents and children were transcribed and analyzed. In the case of the children, utterances included gurgles, cries and pre-linguistic "noise." Two judges, unaware of the research design, independently verified the transcriptions and scored the tapes. Intra- and inter-rater reliabilities were established at the beginning of the analysis and calculated every ten subjects thereafter to the end of the analysis. Reliabilities were .88 and above for all items.

Utterances were scored both as total counts and as individual speech categories. Categories were chosen so as to illuminate the general and specific ways each parent fostered the older child's awareness of the baby and facilitated interaction between the two

children. General and specific categories of dependent variables were:

A. Explicit directives from parent to child urging action upon, to or for the baby in one of the following ways:
   1. Caregiving, e.g., a parent says to the toddler, "Give baby the bottle," "Put the blanket on baby."
   2. Play, e.g., a parent says to the toddler, "Play peek-a-boo with baby," "Make the dolls dance for baby."
   3. Affective, e.g., a parent says to the toddler, "Give baby a kiss."
   4. Cognitive, e.g., a parent says to the toddler, "Show baby what the doggie says," "Show baby the square and the circle," "Show baby the book."
   5. Attend, i.e., a parent says to the toddler, "Look at baby."

B. Awareness remarks. These call the toddler's attention to the infant without explicitly urging action. They include:
   1. Declaratives calling attention to the baby's state, e.g., "Baby is crying," "Baby is tiny."
   2. Interrogatives directed to the baby's state, e.g., "Is baby asleep?"

C. Encouragement of play. These remarks indirectly promote play towards the baby, e.g., a parent says, "Let's roll the ball this way," encouraging the toddler to push a ball toward the

baby in a way judged specifically to engage the child while not mentioning the baby in the utterance.

All utterances made by each member were also scored. They included behaviors described above, plus utterances directed to the baby in response to a noise or cry from the infant.

Results

In order to standardize relationships, each utterance category for every person was divided by that individual's total number of utterances for the session. Uses of each general and specific category were then analyzed through a 2 (sex of baby) X 2 (sex of toddler) X 4 (grouping) repeated measures analysis of variance run for each dependent variable. Grouping is the repeated measure in this design and involves mother alone, father alone, mother with father present and father with mother present. The model was: Y = infant sex (I) + toddler sex (T) + IT + (error A + grouping (G) + IG + TG + ITG + error B).

Significant Parent Gender Effects

Attend directives were significant for grouping ($F = 4.2$; 3,105 df; $p \leq .01$). Tests of pairwise differences indicated more directives to attend or watch the infant were given to the toddler by the father in the father alone setting than the mother in the mother alone setting, the father with the mother present or the mother with the father present.

Instances of awareness declaratives were significant for the

main effect of grouping ($F = 3.64$; 3,105 df; $p \leq .02$). Pairwise tests of the means indicated that fathers alone with the children more often made awareness statements about the infant to the toddler than fathers with mothers present.

The interaction of infant sex and grouping was also significant for awareness promoting remarks ($F = 2.83$; 3,105 df; $p \leq .04$). Fathers alone with the toddler and a girl infant made more awareness statements than mothers alone with the toddler and a girl infant, or fathers with mothers present with girl infants, or fathers alone with the toddler and a boy infant. Interrogatives were significant for grouping ($F = 3.96$; 3,105 df; $p \leq .01$). Tests of pairwise differences indicated that more interrogatives to the toddler regarding the baby were issued by the father alone than the mother alone, the father with mother present, or the mother with father present.

Likewise, encouragement of sibling play was significant for the interaction of baby sex and grouping ($F = 2.93$; 3,105 df; $p \leq .04$). Tests of pairwise differences indicated fathers alone encouraged play more often when the infant was a girl than mother or father in any other baby sex/grouping combination.

Significant Child Gender Effects

Directives encouraging play between siblings were significant for the interaction of toddler sex and infant sex ($F = 4.81$; 1,35 df; $p \leq .04$). Tests of pairwise differences indicated that more

parental play directives were given when both children were girls than when the toddler was a boy and the infant a girl.

Encouragement of play, a significant dependent variable for infant gender ($F = 7.10$; 1,35 df; $p \leq .01$), was more often exhibited when the infant was a girl than when the infant was a boy. Encouragement of play was also significant for the interaction of toddler sex and infant sex ($F = 4.62$; 1,35 df; $p \leq .04$). Tests of pairwise differences indicated that sibling play was more often encouraged when both children were girls than for any other gender combination.

Comparisons Across Utterance Types

Utterance totals were also analyzed for parents to children across utterance types. Utterance totals were tallied by speaker and target. These utterances were compared in a 2 (sex of toddler) X 2 (baby sex) X 2 (parent sex) X 4 (grouping; i.e., mother alone, father alone, mother with father present, father with mother present) analysis of variance where Y = infant sex (I) + toddler sex (S) + IS + error A + grouping (G) + IG + ISG + error B.

Mean length of utterance (MLU) for fathers was 3.59, SD = .71. For mothers, MLU = 3.91, SD = .79. Both parents talked more when the older sibling was a girl than a boy ($F = 6.78$; 1,37 df; $p \leq .01$). Likewise, parents spoke more to baby girls than baby boys ($F = 6.445$; 1,37 df; $p \leq .02$).[2]

Total parental utterances differed by grouping ($F = 11.10$;

2,107 df; $p \leq .0001$). Through pairwise comparisons it was apparent that parents spoke more in the mother alone grouping and the father alone grouping than when they were together. Likewise, grouping was also a significant main effect for parent to toddler utterances ($F = 4.25$; 2,107 df; $p \leq .02$). Pairwise comparisons showed that parents spoke more to the older sibling when mother was alone and when father was alone than when mother and father were together.

Discussion

Similar to previous research, parents in this study, and particularly fathers, spoke more to girls than to boys (Fagot, 1974, 1978; Palkovitz, 1984). More specifically, the results clearly indicate the activity of the father in directing, calling attention to, encouraging and otherwise orchestrating interactions between his children, especially when the youngsters are girls. Since these data were obtained approximately a month after the second child's birth, it is possible that some mothers may still have been experiencing some postpartum effects. Field (1984) has found, for example, that women reporting after-birth depression interacted less with their infants than women not experiencing such depression. But for whatever reasons, our results support literature reporting that fathers use more imperatives and control language with their young children than mothers do (Clevenger-Bright & Stockdale, 1984; Malone & Guy, 1982; McLaughlin, Schultz & White, 1980). Here as in the literature, when fathers were alone

with their children, they used explicit directives (more than mothers did) to encourage the older sibling to play with the younger or to behave in an affective or caregiving way toward the younger. Fathers alone also orchestrated sibling interaction more than either parent did when both parents were together with the children.

With interactional time divided between more participants, the presence of both parents seemed to have an inhibiting effect on the father's vocalizations. Thus it is clear that in future interactional research, parental behavior changes in one- and two-parent settings must be examined independently.

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Author Notes

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Footnotes

[1]Although every effort was made to videotape families when babies were in a quiet, alert state, 2 male babies and 4 female babies were asleep when the family was together. So were 3 male babies and 1 female baby when the mother was alone with the children, and 2 male babies and 1 female baby when the father was alone with the children.

[2]It is important to realize that the rate of baby gurgles and other spontaneous noises did not differ between boy babies and girl babies, nor did it differ across families or settings. Thus, responses to such noises do not explain parents' utterance rates to girl and boy babies.